

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
14 October 2004 (14.10.2004)

PCT

(10) International Publication Number  
**WO 2004/087202 A3**

(51) International Patent Classification<sup>7</sup>: **A61K 31/436**, (74) Agent: GRUBB, Philip; Novartis AG, Corporate Intellectual Property, CH-4002 Basel (CH).

31/164, A61P 37/00, 17/00  
PCT/EP2004/003514

(21) International Application Number:  
PCT/EP2004/003514

(22) International Filing Date: 2 April 2004 (02.04.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
0307867.2 4 April 2003 (04.04.2003) GB

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(71) Applicant (*for all designated States except AT, US*): NOVARTIS AG [CH/CH]; Lichtstrasse 35, CH-4056 Basel (CH).

(71) Applicant (*for AT only*): NOVARTIS PHARMA GMBH [AT/AT]; Brunner Strasse 59, A-1230 Vienna (AT).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): GRASSBERGER, Maximilian [AT/AT]; Schaumburgergasse 12/7, A-1040 Wien (AT). HIRSCH, Stefan [DE/DE]; Theodor-Heuss-Strasse 21A, 79539 Lörrach (DE). MAYER, Friedrich, Karl [AT/CH]; Im Ziegelgarten 9, CH-4104 Oberwil (CH). SEKKAT, Nabila [MA/CH]; Davidsbodenstrasse 34, CH-4056 Basel (CH). STÜTZ, Anton [AT/AT]; Haymogasse 140, A-1238 Wien (AT).

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

(88) Date of publication of the international search report:  
3 February 2005

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: PHARMACEUTICAL COMPOSITION COMPRISING A MACROLIDE IMMUNOMODULATOR

(57) Abstract: Synergistic combination of a macrolide T-cell immunomodulator or immunosuppressant such as 33-epichloro-33desoxyascomycin and a ceramide such as ceramide 3, LPC-9S or linoleic acid are provided, which are useful in particular in the treatment of dermatological or mucosal diseases such as atopic or contact dermatitis or dry skin, asteatotic eczema or xerosis.

**WO 2004/087202 A3**